DOCUMENT RESUME

ED 177 699 EA 012 190

AUTHOR Hobbs, Max E.
TITLE The Issues of Sparsity in Providing Educational Opportunity in the State of Wyoming.
PUB DATE Oct 79
NOTE 23p.; Paper presented at the Annual Meeting of the Association of School Business Officials (65th, Denver, CO, October 14-18, 1979)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; *Educational Finance; *Educational Opportunities; Elementary Secondary Education; *Equal Education; Expenditure Per Student; One Teacher Schools; Rural School Systems; *School Organization; School Size; *Small Schools; Student Needs
IDENTIFIERS *Wyoming

ABSTRACT

Wyoming's funding programs for public education that relate to the issues of sparsity and the state's attempt to provide equal educational opportunity are reviewed. School district problems that relate to the issue of sparsity are also discussed. School district size in Wyoming ranges from the smallest district, by area, of 186 square miles to the largest district having 6,969 square miles. In 1978-79 Wyoming had 50 one-teacher schools and 20 two-teacher elementary schools. Primarily due to sparsity, public education in Wyoming costs more per pupil than in most other states. Isolated students need special programs to assure the opportunity of school attendance. The state makes allowance for the necessary extra cost in the state foundation program. Such consideration relates to moving expenses for parents, room and board provisions for students, mileage provision for parents who provide transportation, and, in some instances, the provision of tuition payments. Evidence that the secondary educational program in Wyoming is offering equal educational opportunities for academic achievement is shown by comparing the average Schclastic Aptitude Test (SAT) scores that were attained by the 6,074 seniors who graduated in 1978 to the national and Rocky Mountain Region (Colorado, Utah, Montana, and Wyoming) average scores. (Author/MLF)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

M. Hobbs

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED177699

EA 012 190

THE ISSUES OF SPARSITY IN PROVIDING EDUCATIONAL OPPORTUNITY IN THE STATE OF WYOMING

Max E. Hobbs
University of Wyoming

PURPOSE OF THE PAPER

The purpose of this paper is to review the state of Wyoming's funding programs for public education that relate to the issues of sparsity and the state's attempt to provide equal educational opportunity for the youth of Wyoming, and also the public school district problems that relate to the issue of sparsity.

INTRODUCTION

American education in the seventies is unique and at times a debatable mixture of idealism, public necessity and big business![1]

The idealism which had its roots with the construction of the United States Constitution could perhaps be expressed today as a firm belief in the right of all children to have the opportunity for an equal education.

The public necessity for education in Wyoming was recognized long ago in the State Constitution, which says in part:

> Article 7, Section 9. The legislature . . . will create and maintain a thorough and efficient system of public schools

---

[1] Future Directions for School Financing, National Education Finance Project, 1212 S.W. 5th Avenue, Gainesville, Fla., 1971, p. 1.

> adequate to the proper instruction of all youth of the State between the ages of six and 21 years, free of charge; . . .[2]

The business aspect of education is identified with yearly allocations to the nation's schools of more than $86 billion in federal, state, and local funds in 1978 (NEA Report). In 1978, $213 million plus for general fund purposes was spent for educating the 94,000 students in Wyoming.

The business of education also brings us to the problem of financing such a vast enterprise and to two basic questions:[3]

1. "Where do you get the money needed for education?"
2. "How do you allocate it equally after you get it?"

Once the money is in hand, how can it be allocated to insure an equal educational opportunity for all children?[4] Burrup says place of birth should not arbitrarily determine the kind and amount of education a student should receive, for the principle of equality of educational opportunity applies to all citizens.[5] Various court decisions have also upheld this principle.

Finding an answer to the question of how to allocate funds to insure equal educational opportunity has, to this date, been mostly insurmountable. The equality of opportunity problems, numerous and varied, range from assisting the inner city density problem with the high number of special need students and the accompanying high cost for such education; to the problems of sparsity and of educating the 94,000 students in the State of Wyoming

---

[2]The Wyoming Constitution, Article 7, Section 9.

[3]Future Directions for School Financing, loc. cit.

[4]Ibid., p. 2.

[5]Percy E. Berrup, Financing Education in a Climate of Change (Boston: Allyn and Bacon, Inc., 1974), p. 215.

that are sparsely located throughout its 97,914 square miles (including Yellowstone) and the accompanying high cost for such education.

Approximately 40,000 of the 94,000 students in Wyoming are located in five school districts, which leaves 54,000 students located throughout the state. We would find little disagreement with Burrup's ideal contention that place of birth and where a child lives should not determine the kind of education a student should receive; however, realistically, such is often the case, and Wyoming is a state of case.

SPARSITY IN WYOMING

As Johns and Morphet[6] said, many studies have shown that both small schools and small school districts usually offer less satisfactory educational programs, are less efficient, and are more expensive to operate than larger schools and districts. Where small enrollment districts are maintained, the costs per student are high and some of the needed services are not always provided.

Though costly to operate, some small schools are necessary because they are isolated. This factor is important to Wyoming and other western states. In 1978 Wyoming spent approximately $2,280 per pupils for general fund expenses. In an attempt to improve school district efficiency, Wyoming passed a reorganization law in 1969. The program of reorganization was completed in 1978 and lowered the number of school districts from 165 in 1969 to 51 in 1978. School district size in Wyoming ranges from the smallest district by area of 186 square miles (one of six elementary districts)

---

[6]Roe L. Johns and Edgar L. Morphet, The Economics and Financing of Education (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1975), pp. 187-188.

to the largest district having 8,969 square miles. As a point of interest, the largest school district in Wyoming is larger by land area than the states of Rhode Island 1,214 square miles, Delaware 2,057 square miles, Connecticut 5,009 square miles, New Jersey 7,836 square miles, and Massachusetts 8,257 square miles. Thirteen other districts are larger than Rhode Island and Delaware, and 28 of the 51 school districts in Wyoming are larger than Rhode Island.

SCHOOL ORGANIZATION IN WYOMING

The local school board determines the type of grade organization under which a district will operate. The local board then requests from the State Board of Education its approval for the district's grade organization. School organization in Wyoming is determined according to the following guidelines.

An elementary school is defined as a school having two or more teachers and offering instruction in any combination of grades one through six or one through eight.

Separately organized, accredited junior high schools with grades seven and eight, having a minimum of 30 pupils enrolled in both grades combined and a minimum of three teachers and a principal with appropriate certification, may be considered as separate schools to which the elementary divisors (Table I, following page) are applied.

In six year high schools, grades seven and eight may be considered as either a separate junior high school or part of an elementary school. If grades seven and eight meet minimum enrollment requirements (30), and grades seven through 12 have at least five full time teachers and a principal with appropriate certification and the school is accredited, then the seventh

and eighth grades are listed as a separate junior high school. If these conditions are not met, average daily membership for seven and eight is included with the elementary grades.

In three year junior high/middle schools, grades seven and eight are counted as a junior high school unit. If grade nine is with the junior high school, grade nine is included in the high school units with grades 10, 11, and 12 for ADM count. Grades six and under are assigned to elementary for ADM count.

Table 1 shows the computation of classroom units for elementary schools and the seventh and eighth grades in junior high schools. No more classroom units are allowed for any divisor than the minimum number of classroom units for the next larger divisor. To prevent a lowering of the number of classroom units when moving from one school group to the next higher one, the maximum number of classroom units in any group (highest ADM in the group divided by the divisor) is equal to the minimum number of units in the next larger group.

TABLE 1. ELEMENTARY SCHOOL DIVISORS
(Includes Grades 1-8)[7]

ADM	Divisor	Minimum Units	Maximum Units
Fewer than 25	10	1.00	2.40
25 to 44	15	2.40	2.93
45 to 89	18	2.93	4.94
90 to 139	20	4.94	6.95
140 to 199	23	6.95	8.65
200 and more	25	8.65	

[7] The Wyoming School Foundation Program (Cheyenne, Wyoming: State Department of Education, 1976), p. 3. (Tables 1 and 2).

Table 1 for elementary schools is read as follows: If there are fewer than 25 pupils in average daily membership, the divisor is ten and the minimum number of units to be given to such school is one while the maximum number is 2.40 units. For the other size groups, the divisors increase up to 25 for schools having 200 or more pupils. No maximum number of units is given for this group.

Secondary schools are defined for foundation program purposes as schools consisting of grades nine through 12. Table 2 is used for computing classroom units for secondary schools. This table also shows the school groups, the divisors, and the minimum and maximum number of classroom units for each group.

TABLE 2. SECONDARY SCHOOL DIVISORS
(Includes Grades 9-12)

ADM	Divisor	Minimum Units	Maximum Units
Fewer than 25	10	1.00	2.40
25 to 59	12	2.40	4.91
60 to 109	15	4.91	7.27
110 to 169	18	7.27	9.39
170 to 239	21	9.39	11.38
240 to 299	23	11.38	13.00
300 and over	25	13.00	

This table shows a slightly different grouping for secondary schools than for elementary schools. The divisors are lower for the small schools, but approximately the same for the larger ones. One may consider the number of units as roughly comparable to the number of classrooms that are needed, or the number of teachers employed for classroom teaching.

The weighting of classroom units is based on the average number of pupils in daily membership as compared to the number of classroom teachers in schools of different enrollment. It may be seen that smaller groups of children are counted for classroom units in the small schools than in the large ones. In elementary schools of over 200 pupils and in secondary schools of over 300, the divisors remain constant, so that for these larger schools the number of classroom units increases directly with the increase in enrollment over the 200 or 300 pupil limits.

The computations shown in Table 1 and 2 take into consideration only the number of classroom units for regular classroom teaching; all eligible districts receive foundation funds based on ADM units. Other school personnel are needed by some schools, however, and the determination of classroom units for these needs is based upon other computations. (For special education units, vocational units, kindergarten and one-teacher schools.)

ADM UNIT COUNT

Within the city limits of a community, all elementary students are added together for determining the district's elementary ADM count. Outlying schools are considered separately. The same is true for junior high and secondary schools.

For foundation program purposes, in general the ADM at the conclusion of the previous school year is used for new budget calculation purposes. Current year enrollment projections are used for determining the number of special education and vocational units; however, scheduled adjustments to balance the district requests and their real qualifications are a part of the program. One-teacher schools are also reported for the current year.

Though computation of ADM units is based on ADM for the previous year, the program contains a provision for the recalculation of units should enrollment increase or decline by 10 per cent or 100 students. Adjustments relate to comparing the ADM for the first 60 days of the current school year to the previous year, or by February 1 of the current year if enrollment has increased 15 per cent by that date. For recalculation purposes, separate computations are made for kindergarten, elementary, junior and senior high schools.

PROGRAM PROVISION FOR SPARSITY ADJUSTMENT

As previously indicated, small schools do not have the economies of operation that are possible for larger schools; therefore, the per pupil cost for an equivalent quality of education is higher than in the larger schools. This is primarily due to the low pupil-teacher ratios that are necessary if the needed educational programs are provided.[8]

Wyoming is one state so sparsely settled that it is not practical to establish schools (statewide) of economical size. In recognition of the sparsity, the state makes allowance for the necessary extra cost in the state foundation program. The problem of sparsity is addressed through the divisor tables that are used for determining ADM units as previously shown with tables 1 and 2. Table 3 shows a breakdown of the ADM unit value per pupil as the divisors are applied. The ADM value of $27,300, to be used for the 1979-80 school year, is used to show the per pupil dollar allowance by division category.

---

[8] Roe and Morphet, op. cit. pp. 245-246.

TABLE 3. FOUNDATION PROGRAM DATA
NUMBER OF PUPILS PER ALLOTTED REGULAR INSTRUCTIONAL UNITS
AND PER PUPIL DOLLAR ALLOWANCE PER CATEGORY

Elementary and Junior High Schools

Divisory Classification	ADM Pupil Units	Unit Value	Before Program Adjustment Pupil Value
Divisor of 10	10 to 1	$27,300	$2,730
Divisor of 15	15 to 1	27,300	1,820
Divisor of 18	18 to 1	27,300	1,516
Divisor of 20	20 to 1	27,300	1,365
Divisor of 23	23 to 1	27,300	1,187
Divisor of 25	25 to 1	27,300	1,092

High Schools

Divisory Classification	ADM Pupil Units	Unit Value	Before Program Adjustment Pupil Value
Divisor of 10	10 to 1	$27,300	$2,730
Divisor of 12	12 to 1	27,300	2,275
Divisor of 15	15 to 1	27,300	1,820
Divisor of 18	18 to 1	27,300	1,516
Divisor of 21	21 to 1	27,300	1,300
Divisor of 23	23 to 1	27,300	1,187
Divisor of 25	25 to 1	27,300	1,092

One-Teacher Schools

One-teacher schools with enrollment of one or more students are also counted as one ADM Unit for computational purposes.

As indicated, the unit value for 1979-80 is $27,300. For 1978-79 the unit value was $21,700. The unit increase is projected to increase the state's total participation in the foundation program in 1979-80 by an estimated 30 per cent new state money, increasing the state's share of funding from $57 million plus in 1978-79 to an estimated $75 million plus for 1979-80.

For the 1977-78 school year (summary figures are not available at this date for 1978-79), the statewide general fund cost per classroom unit ranged from a low of $30,546 to a high of $63,027. The statewide average cost per classroom unit was $36,386.[9]

PROGRAM PROVISION FOR ISOLATED PUPILS

Legal Basis: W.S. 21-4-40.: "The board of trustees of any school district within the state shall provide transportation or maintenance not to exceed $75 per month per pupil unless a greater maximum is established by the state board, for isolated elementary or high school pupils resident within the district, whenever it would be more in the interest of the affected children to provide such transportation or maintenance than to establish a school to serve such pupils. In no case shall sums paid under this section exceed the actual costs incurred by parents or pupils."

Approval Policy. Approval of all applications for payment of transportation or maintenance of isolated pupils in the district must be recorded in the minutes of the board of trustees. Local boards may approve an amount of up to $75 or less per pupil per month. However, if the amount approved exceeds $75 per month, then local boards must obtain State Board of Education approval.

Private Transportation. "Pupils transported by regularly established bus routes are not eligible for isolation unless private transportation is necessary to take them to meet a bus.

---

[9] Wyoming Fund Accounting and Reporting, Book #3 (Cheyenne, Wyoming: State Department of Education, 1977-78), p. 14.

Maximum allowances per vehicle are 17¢ per mile over improved roads and 23¢ per mile over unimproved (dirt, graded or ungraded, and trail) roads. Reimbursement is computed on the basis of the total miles traveled monthly by the vehicle, not on the basis of the number of pupils transported. Mileage must be substantiated by a daily log accompanying payment vouchers.

Board and Room. Payments for board and room are computed on the basis of the number of pupils and should be allowed only when pupils leave their homes to attend other schools and are not accompanied by one or both parents or guardian. Board and room rates are left to the discretion of the local board of trustees, but should be within a reasonable amount.

Family move. A family move is defined as a situation in which one or both parents or guardian with school age pupils move to a temporary residence for the sole purpose of entering the pupils in an established public school. Maximum family move allowances are as follows: $95 for one pupil; $120 for two pupils; $145 for three or four pupils; and $160 for five or more pupils.

When considering isolation requests, local boards must consider:

a. meeting student and parent needs,

b. paying the family or guardian to bring students to a bus pickup or to school,

c. locating a one room mobile classroom at the home or in the area,

d. assigning a teacher to the ranch, or

e. moving the family to a school attendance area.

When considering the individual problems of isolated K-12 students during a school year, some districts find it necessary to use a combination of the solutions for meeting student needs. When considering winter road conditions and the distance involved, some students may stay on the ranch

through November and then move to the school community. Transportation is also complicated by weather, road conditions and distance. Many parents may transport their children 100 or more miles (round trip) daily. One hundred miles per day at 23¢ per mile times 20 school days per month would be $460.00 per month or $4,140 per nine months.

There is no state breakdown for specific isolation expenses. Transportation expenses for isolation may be listed as transportation expenses for the elementary programs, etc.

The foundation program does include one line item for claiming isolation payments. This item includes transportation and regular isolation expenses. A district may claim 75 per cent of its previous year's expenditures for isolation purposes.

PROGRAM PROVISION FOR REIMBURSEMENT OF VOCATIONAL EDUCATION CLASSES

For vocational education, additional classroom units are allowed on the basis of the number of full-time vocational teachers who teach vocational subjects during the current year. One classroom unit, $27,300 (prior to foundation adjustment) is allowed for each certified teacher who teaches vocational subjects in grades 7-12 full time (five periods); for less than full time a proportionate fraction of a classroom unit is allotted. The class periods must be equal in length to academic class periods for grades 7-12, and for grades 11-12, classes may be grouped into blocks of time not to exceed three class periods.

Classes that qualify for vocational reimbursement are: career orientation, grades 7-8; career exploration (including industrial arts, consumer and home-making education, grades 7-10); and career preparation in

11 cluster areas, grades 11-12. Other new classes relating to the world of work may be considered for approval upon submission of a planned program to the State Department of Education. (This program also addresses the high cost laboratory areas of industrial and homemaking arts.)

The minimum classroom enrollments that are necessary for establishing foundation program entitlement for vocational education (with no exceptions allowed) are shown in table 4.

TABLE 4. JUNIOR AND SENIOR HIGH SCHOOL ENROLLMENT AND NUMBER OF STUDENTS REQUIRED FOR VOCATIONAL UNITS

Junior and Senior High School Enrollment	Number of Students Per Vocational Class Units
0 - 124	5 students/per class
125 - 144	6 students/per class
145 - 164	7 students/per class
165 - 184	8 students/per class
185 - 200	9 students/per class
over 200	10 students/per class

Maximum classroom enrollment for handicapped students served in vocational programs is as follows:

a. For students with two or more major handicaps as defined by the SDE or those severely impaired - 3 students per class.

b. For all other identified handicapped - 5 students per class.

The vocational program for exceptional children provides for homogeneous grouping and raises some questions when considering the intent of Public Law 94-142. When considering the low enrollment requirements for unit recognition, please note table 5 concerning high school enrollment.

TABLE 5. FOUNDATION PROGRAM DATA 1977-78,
ADM BY DIVISOR CLASSIFICATION
FOR SENIOR HIGH SCHOOL

	ADM 25-59	ADM 60-109	ADM 110-169	ADM 170-239	ADM 240-299	ADM 300 & over
Number of High Schools Per Classification	13	17	13	6	3	22

There are eight 9-12 schools in Wyoming that have an enrollment of 1,000 or more students; only one high school has an enrollment of over 2,000 students. For the 1978-79 school year, there were 649 vocational units approved for grades 7-12 in the junior high and high schools. The 74 high schools all reported units of vocational education.

OTHER PROGRAM FACTORS
THAT RELATE TO SPARSITY

There is no precise measure of sparsity effects that can be used in expenditure comparisons. The effects are in many instances so closely tied to district structure that the two are not separated. Six central office administrators in Wyoming identified the following program factors that relate to sparsity problems and school administration. Most relate to funding programs; however, some do not.

a. Communication: Communicating with patrons and staff that are 40 to 80 miles distance from the central office is difficult. The outlying schools often feel they get what is left over, etc. This problem also relates to developing staff unity.

b. Pupil-Teacher Ratios: Very low pupil-teacher ratios in small schools are necessary when complete programs are offered.

c. Staff Development: Distance creates a time and expense problem for teacher in-service programs.

d. Kindergarten: Scheduling for kindergarten raises a number of questions. Do you schedule kindergarten for two or three full days by semester or do you hold one-half day sessions? This question relates to parents picking up or delivering their students and is affected by distance, location, road condition, weather, etc. Many kindergarten car pools may make 100 mile round trip deliveries and pickups. Though kindergarten programs are not required by law, all schools offer the program. Outlying schools may enroll as few as two to seven students. Some districts hold kindergarten during spring only, full days for nine weeks. Parents are paid either 17¢ or 23¢ per mile for such transportation, depending on road conditions (surfaced or unsurfaced) and district policy.

e. District Travel for Administrators: It is common for outlying schools to be located 40 to 80 miles from the central office. Rural coordinators will often spend two or three days each week touring the schools. District superintendents usually designate certain days each week for visitation purposes. Some such schools would be 100 miles apart.

f. Board Members: Many board members will travel from 100 to 200 miles round trip to attend board meetings. It is thought the distance problem discourages some potential board members from running for the Board. (Board members in Wyoming receive no pay for service, only mileage and necessary related expenses.)

g. Teacherages: Large districts with outlying small school attendance areas routinely provide housing units for teachers. Mobile homes are usually purchased since they may be relocated as the need dictates. (Teacher rental fees range from $45 to $200 per month (IRS purposes), while utilities other than phone are usually provided by the district.) Principals and central office personnel receive calls concerning appliances that do not work, etc. Repair and service arrangements are usually completed by the administrators. One district reported ownership of 34 teacherages. Some districts build apartments for the outlying K-12 school attendance areas.

h. Repair Service: Providing routine maintenance programs for the outlying schools is costly and also difficult. Service people may travel several hundred miles to make minor repairs. Custodians for the outlying schools are expected to make many minor repairs.

i. Isolation Pay: Districts customarily provide extra pay for teaching in isolated schools. Depending on the district and location, extra pay ranges from $500 to approximately $1,000. Isolation payments may also be supplemented through special mileage allotments.

j. Transportation: The relative need for transportation versus small school operation is influenced by a number of factors affecting the time element in transportation--including road conditions, distribution of population, highway patterns, topography, weather, location of buildings and routing efficiency. Add to the normal cost, the mileage provided to the many parents for private transportation, insurance to cover above that carried by the parents, etc.

k. Co-curricular Programs: Co-curricular programs are supported through general fund appropriations. Due to the travel distances involved

between schools, co-curricular programs, especially athletic events, represent a substantial district cost. Inner conference travel routinely necessitates one-way travel of 325 to 350 miles. One district reported traveling 493 miles one way for athletic contests. Districts in Wyoming use busses for such travel and many districts own their own "Greyhound" type busses for this purpose. However, some districts either use regular school busses or charter the larger busses for their longer trips. Food and lodging for overnight trips are costly. Excluding salaries for these programs, the larger schools will appropriate from $100,000 to $250,000 for program support. The appropriation for smaller schools with fewer program activities will range between $50,000 to $100,000 per year. One of the large busses would cost an estimated $125,000.

l. Cafeteria Programs. Though 95 per cent or more of students in outlying areas utilize the cafeteria facilities, the small numbers preclude sufficient income for self sufficiency. Such programs are supplemented from the district's general fund.

m. Isolated One-Teacher School Considerations. Considering that the teacher of an isolated school may be snowbound for weeks at a time, yearly calendars are frequently different for one-teacher schools than for the district. Breaks are scheduled for "bringing the teachers out" for recreation purposes. Some districts bring isolated teachers out for long scheduled weekends at the Holiday Inn, etc. Districts develop their own programs for serving the needs of their isolated teachers.

n. Special Teacher Programs. Most districts employ traveling teacher teams which serve the outlying schools. Teams usually include music, art, physical education and developmental or remedial reading. The

one-teacher schools are not always accessible to the traveling teacher teams.

Expenses for the items reviewed are typically accommodated through regular general fund programs, are not specifically separated as isolation costs, and are tied to district structure.

SPARSITY AND PROVIDING EDUCATIONAL OPPORTUNITY IN THE STATE OF WYOMING

As was previously reported, many studies have shown that small enrollment districts and small schools are more expensive to operate than larger enrollment districts and larger schools. To address the issues of sparsity, states must provide special funding programs to supplement the small schools and to provide equality of educational opportunities for students; such would be true for Wyoming when considering that the per pupil cost for public education is among the highest in the nation and that the state does recognize the issues of sparsity with special funding programs. The intent of the special funding programs is to provide equality of educational opportunity for the students of Wyoming. The question then is do the students in Wyoming receive equality of educational opportunity when compared to other students in Wyoming and to other states in the nation?

One would recognize in Wyoming the similar concerns for equity of district funding and for providing equality of educational opportunity that would probably be true for all states. However, the isolated school age youth of Wyoming do have the opportunity to attend schools and they are required by law to do so until they are 16 years of age or have completed the eighth grade.

If a state's secondary educational programs are judged effective in relation to average student achievement at the time of graduation from high school, then the educational programs in Wyoming must be providing equality of educational opportunity when compared to students in other states of the nation. The SDE provided the following S.A.T. achievement test information concerning the 6,074 graduating seniors in 1978.

TABLE 6. S.A.T. AVERAGE TEST SCORES
FOR 6,074 WYOMING SENIORS WHO GRADUATED IN 1978,
COMPARED TO NATIONAL AND ROCKY MOUNTAIN REGION
TEST AVERAGES FOR 1978
(1979 S.A.T. states averages are not available at this time)

S.A.T. Score Areas	Nat'l. Average Scores	Rocky Mountain Average Scores (Utah, Colorado, Montana, Wyoming)	Wyoming Average Scores
Verbal Scores	429	480	498
Mathematic Scores	468	525	542

If graduating senior achievement test score averages are a valid measure of secondary educational programs, then one could conclude that at least for the 1978 seniors, they had received an equality of academic educational opportunity when comparing their average achievement scores to the national and Rocky Mountain Region average scores.

SUMMARY REVIEW

Equality of educational opportunity is an educational goal subscribed to by most American citizens and is strongly supported by the citizens of Wyoming. As Burrup said (ideally) place of birth should not determine the kind and amount of education a student should receive, for the principle

of equality of educational opportunity applies to all citizens. However, practical application of this theory poses many problems for the different states. The educational problems that relate to providing equal student opportunity in the different states are in many instances unique to the state. Sparsity is one such problem that must be addressed by Wyoming and other western states. States that have sparsity problems must develop special funding programs to supplement special student needs if the state is to provide equality of educational opportunity. Some characteristics of the sparsity problems would be as follows:

1. Sparsity of population - no matter what type of district structure, increases per pupil expenditures for public schools. Small schools are necessary in some states and probably will be for some years to come.
2. Small schools do not have the economies of operation that are possible for large schools.
3. Small school per pupil costs for an equivalent quality of education will be higher than in large schools, due to lower pupil-teacher ratios that result from providing the educational programming needed.
4. In Wyoming, there is no precise measure of sparsity effects that can be used in expenditure comparisons. Many of the effects are so closely tied to district structure that the two are not completely separated. The budget flexibility for accommodating needs of sparsity provides local boards with the opportunity to consider each request individually.
5. To make allowance for the extra cost of sparsity, the Wyoming foundation program uses a division table that decreases the number

of pupils required per instructional units for the small schools and also for vocational education units. One-teacher schools are also recognized as full ADM units. (In 1978-79 Wyoming had 50 one-teacher schools and 20 two-teacher elementary schools.)

6. Transportation need in sparsely populated areas is influenced by a number of factors--time, road conditions, population density, highway patterns, topography, weather, location of buildings, and routing efficiency.
7. Isolated students need special programs to assure the opportunity of school attendance. Such consideration relates to moving expenses for parents, room and board provisions for students, mileage provisions for parents who provide transportation, and in some instances the provision of tuition payments.
8. Wyoming spent approximately $2,280 per pupil from general fund appropriations in 1978.
9. Primarily due to sparsity, public education in Wyoming costs more per pupil than in most other states. However, when comparing the average S.A.T. achievement test scores that were attained by the 6,074 seniors who graduated in 1978 to the national and Rocky Mountain Region (Colorado, Utah, Montana, and Wyoming) average scores, the secondary educational program in Wyoming must be offering equal educational opportunities for academic achievement.

SELECTED BIBLIOGRAPHY

Berrup, Percy E. Financing Education in a Climate of Change. Boston: Allyn and Bacon, Inc., 1974.

Future Directions for School Financing. Gainesville, Fla.: National Educational Finance Project, 1971.

Johns, Roe L. and Edgar L. Morphet. The Economics and Financing of Education. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1975.

The Wyoming Constitution.

Wyoming Fund Accounting and Reporting, Book #3. Cheyenne, Wyoming: State Department of Education, 1977-78.

The Wyoming School Foundation Program. Cheyenne, Wyoming: State Department of Education, 1976.